

FIG. 1

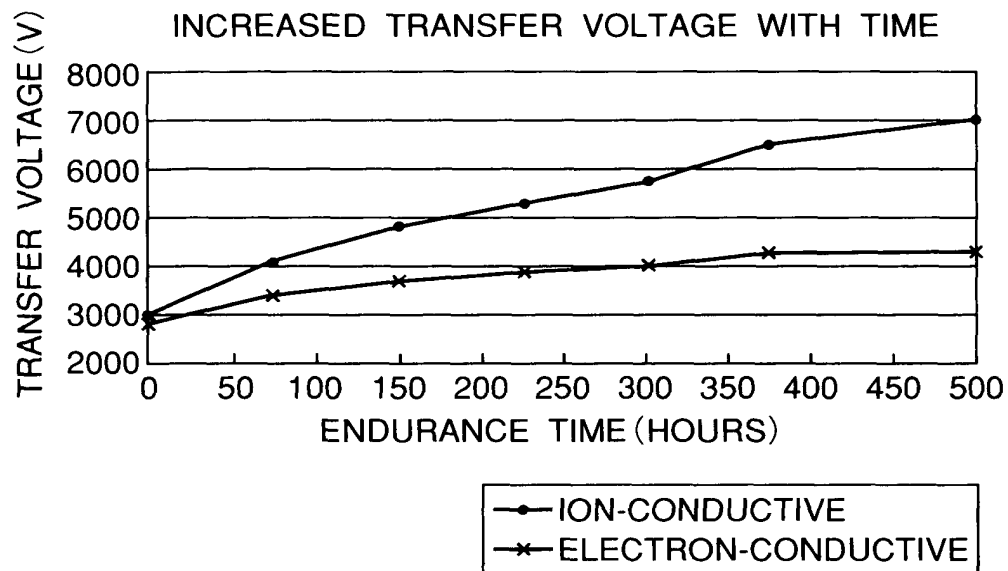


FIG. 2

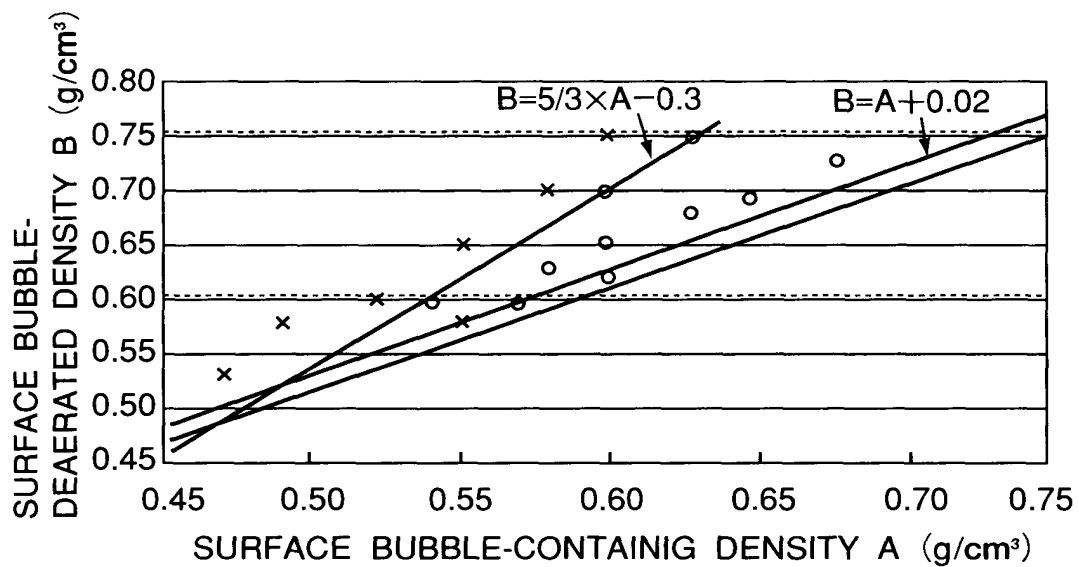


FIG. 3

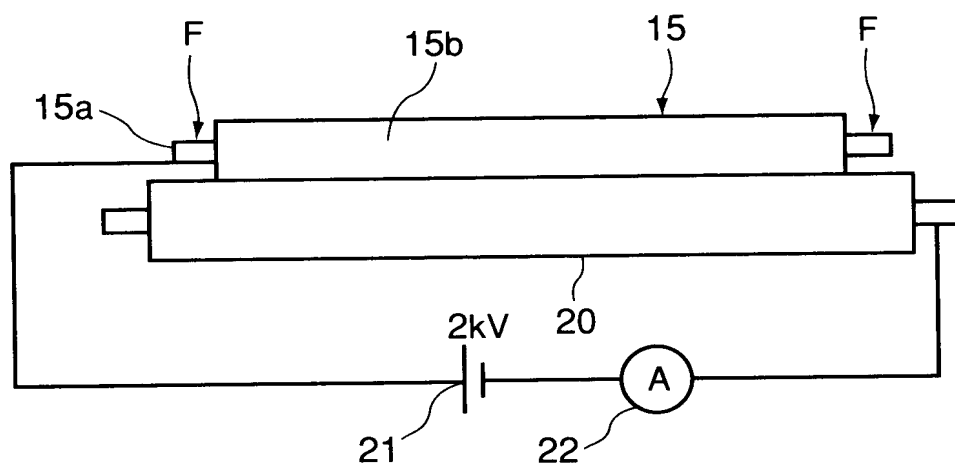


FIG. 4

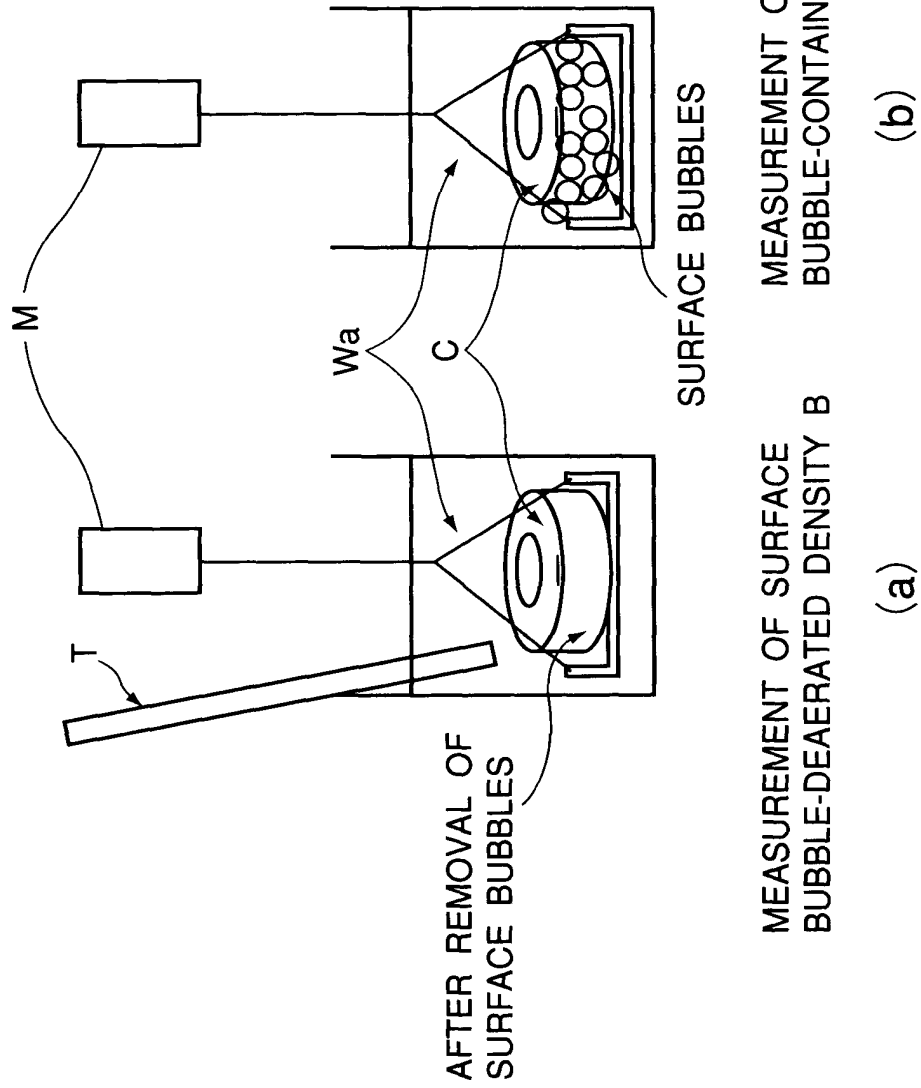


FIG. 5

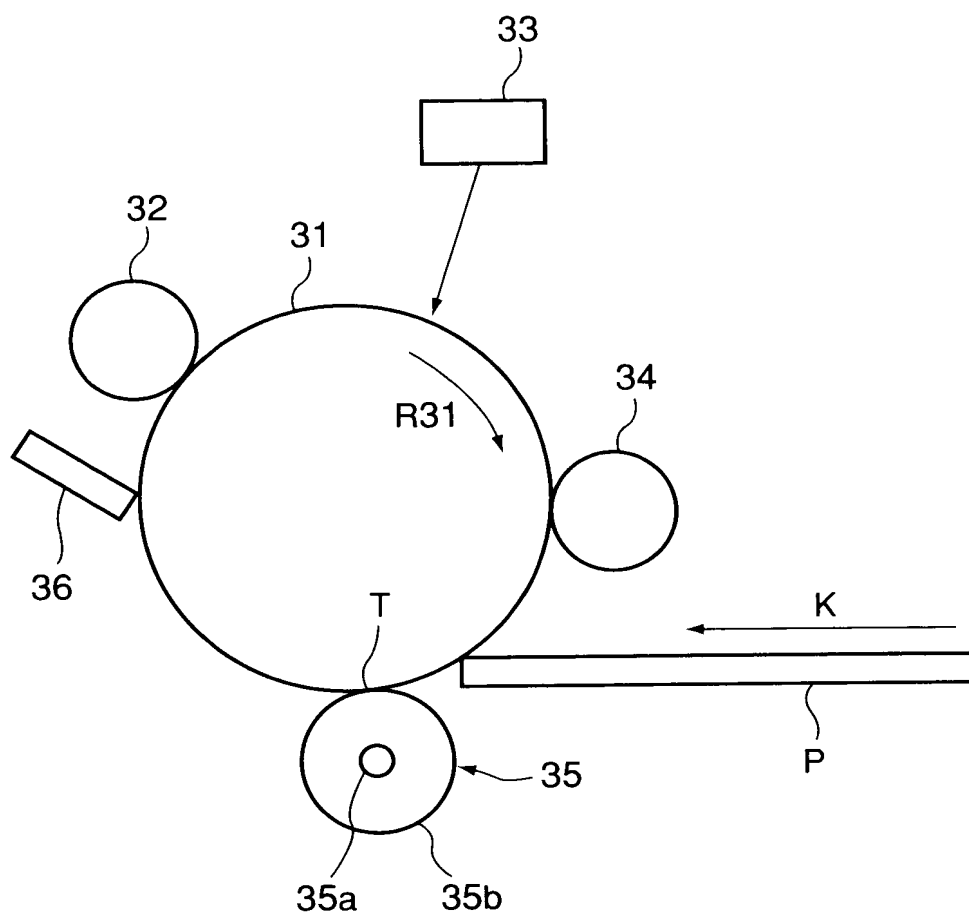


FIG. 6

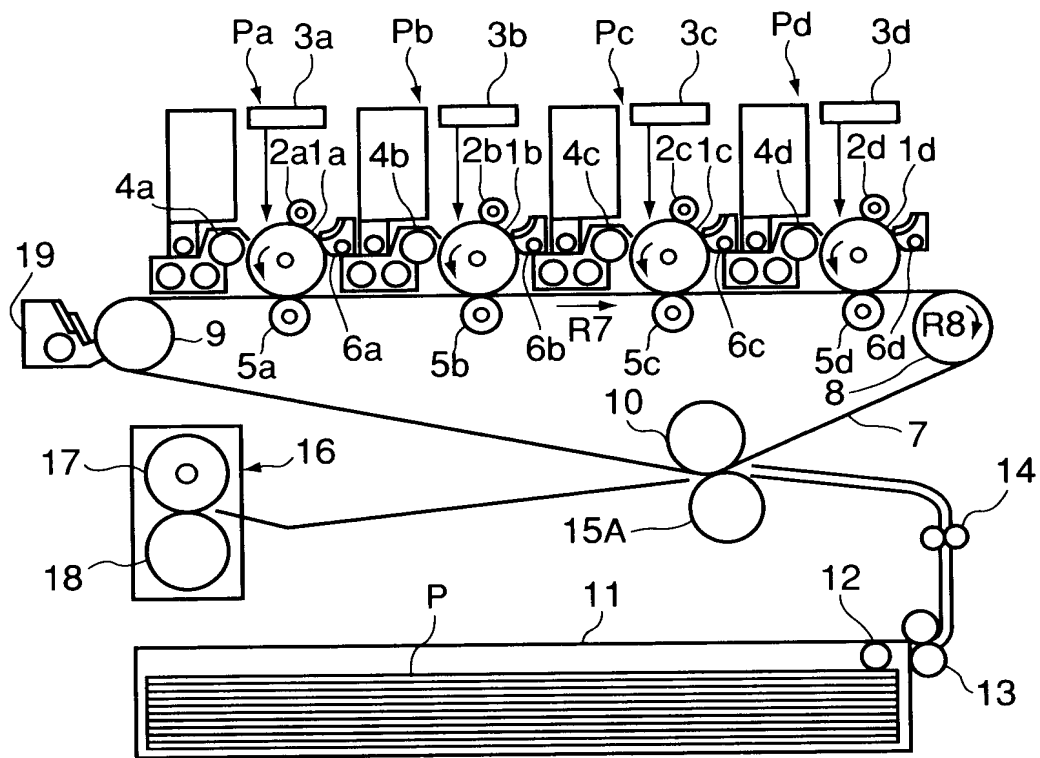


FIG. 7

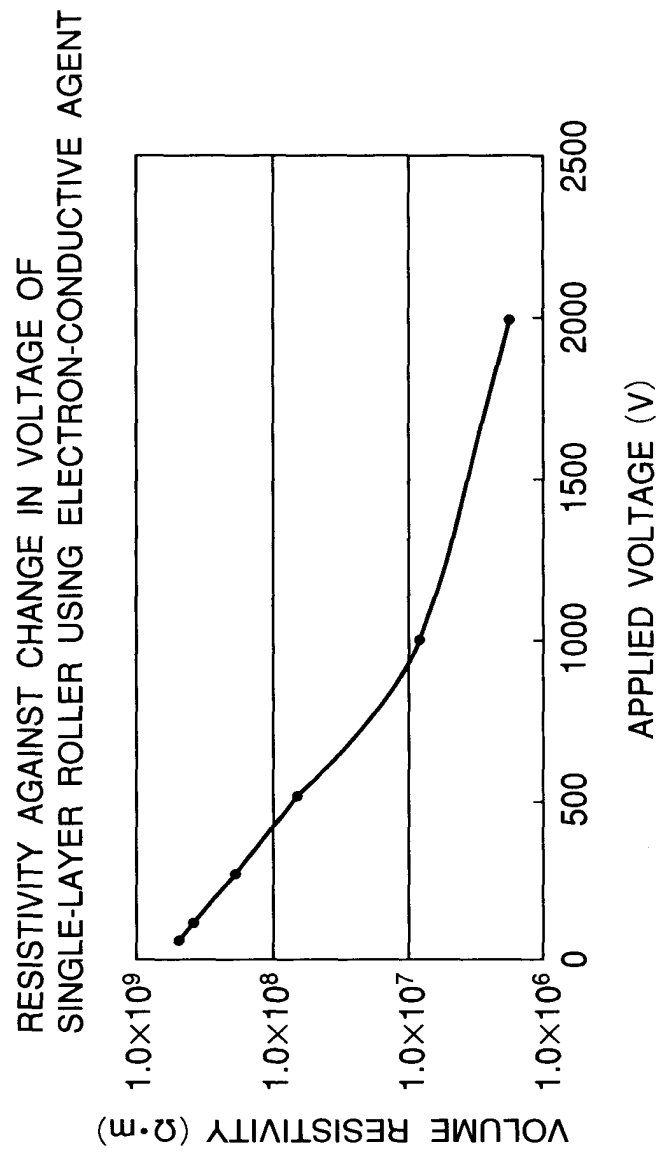


FIG. 8

SURFACE BUBBLE- CONTAINING DENSITY A	SURFACE BUBBLE- DEAERATED DENSITY B	INCREASE IN RESISTANCE AFTER CONTINUOUS ENERGIZATION
0.68	0.73	○
0.47	0.53	×
0.49	0.58	×
0.52	0.6	×
0.54	0.60	○
0.54	0.59	×
0.55	0.65	×
0.55	0.58	×
0.57	0.60	○
0.58	0.63	○
0.58	0.7	×
0.60	0.62	○
0.60	0.65	○
0.60	0.70	○
0.6	0.75	×
0.63	0.75	○
0.63	0.68	○
0.65	0.69	○

FIG. 9

DENSITY A	DENSITY B	THICKNESS (mm)	CORE METAL DIAMETER (mm)	INCREASE IN RESISTANCE	CRACK	SLACK
0.63	0.65	2	20	○	X	○
0.65	0.67	3	18	○	X	○
0.58	0.63	4	16	○	△	○
0.60	0.62	4.5	15	○	○△	○
0.63	0.65	5	14	○	○△	○
0.62	0.65	5.5	13	○	○△	○
0.64	0.68	6	12	○	○	○
0.62	0.64	7	10	○	○	△
0.61	0.65	8	8	○	○	X
0.62	0.65	9	6	○	○	X
0.63	0.67	10	4	○	○	X

FIG. 10

DENSITY A	DENSITY B	THICKNESS (mm)	CORE METAL DIAMETER (mm)	INCREASE IN RESISTANCE	CRACK	SLACK
0.63	0.65	6	12	○	○	○
0.64	0.67	7	12	○	○	○
0.6	0.64	8	12	○	○	○
0.62	0.65	9	12	○	○	○
0.63	0.67	10	12	○	○	○

FIG. 11

DENSITY A	DENSITY B	PRESSURE (Pa)	HOLLOW IMAGE	TRANSFER FAILURE	CHANGE IN RESISTANCE
0.63	0.65	1.2×10^3	○	X	○
0.65	0.67	2.5×10^3	○	△	○
0.58	0.63	5.0×10^3	○	△	○
0.63	0.65	7.0×10^3	○	○	○
0.64	0.68	1.3×10^4	○	○	○
0.62	0.64	7.3×10^4	○	○	○
0.61	0.65	9.7×10^4	○	○	○
0.62	0.65	2.0×10^5	○	○	○
0.63	0.67	3.0×10^5	△	○	○
0.62	0.65	5.0×10^5	X	○	○

FIG. 12